



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,842	06/26/2003	Harvey E. Cline	29315	7639

6147 7590 02/27/2006

GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
NISKAYUNA, NY 12309

EXAMINER

JASANI, ASHISH S

ART UNIT PAPER NUMBER

3737

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/608,842	Applicant(s) CLINE, HARVEY E.	
	Examiner Ashish S. Jasani	Art Unit 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/22/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

2. Claims 1 – 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Resnick et al. (Cerebral Cortex; May 2000; 10:464-472).

With regards to claims 1, 8, 13, and 20; Resnick teaches of a longitudinal neuroimaging study of non-demented older participants. Brain structures are measured by MRI during the first two annual evaluations. Longitudinal analysis demonstrates an increase of 1526 mm³ in ventricular volume over 1 year, but no detectable change in total or regional brain volumes (abstract). Resnick teaches of a volumetric 'spoiled grass' (SPGR) scan (page 465, ¶ 2). Resnick teaches of "Ventricle-to-brain ratios (VBR) are also calculated to control for individual difference in overall brain size" (page 465, ¶ 7).

With regards to claims 2 – 4 and 14 - 16, Resnick teaches that “volumetric quantification of MRIs focuses on ventricular CSF, gray matter, white matter and brain (gray + white) volumes” (page 465, ¶ 3).

With regards to claims 5 and 17, Resnick teaches of studying 116 patients and determining the VBR associated to each patient. “The statistical analysis was performed using SAS Version 6.12 on an Alpha/VMS and SPSS Version 4.1 on a VAX/VMS computer” (page 465, ¶ 7). Resnick also teaches that “a backward elimination procedure was employed” (page 466, ¶ 1).

With regards to claim 6 and 18, Resnick teaches of performing the imaging two times within a year’s period (abstract). Resnick teaches in *Figure 5* of the comparison between *Year 1* and *Year 2* VBR.

With regards to claim 7 and 19, Resnick teaches of “investigation of brain changes and their association with cognitive and memory decline in older participants” (page 464, ¶ 4) which is, to one skilled in the art, Alzheimer’s Disease.

With regards to claim 9 and 21, Resnick teaches of “additional image series, including a double echo protocol for quantification of sulcal CSF, were also acquired” (page 465, ¶ 2).

3. Claims 10 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Rusinek et al (Radiology; 1991; 178:109-114). Rusinek teaches of measuring cerebral loss of gray matter using "a method for measuring the volumes of gray and white matter with use of dual-sequence magnetic resonance (MR) imaging" (page 109, ¶ 3). "The first sequence had a repetition time (TR) of 5,000 msec, echo time (TE) of 100 msec, and inversion time (TI) of 490 msec. The long TR and long TE serve to enhance the signal from the CSF; TI is selected so that a null signal is generated by the Ti value intermediate between the gray and white matter (8). The second sequence, with 1,400/30/425 (TR msec/TE msec/TI msec) provides approximately 5:1 contrast between the white and the gray matter" (page 109, ¶ 6).

4. Claims 11-12 and 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Paley (Radiology 1994; 190:879-886). Rusinek teaches to "prospectively study the cerebrospinal fluid volume-total intracranial volume ratio (CSF/ICV)" (abstract). Rusinek also teaches "a total of 258 volume measurements were obtained with use of a 1.5-T magnetic resonance (MR) imager and the cluster localized automated spherical segmentation technique (which reduces two-dimensional pixel data from dual spin-echo MR images to a one-dimensional histogram)" (abstract).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashish S. Jasani whose telephone number is 571-272-8025. The examiner can normally be reached on Mon. - Fri. 9:30 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571) 272 - 4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ASJ


BRIAN L. CASLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700